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FINAL ABBREVIATED CONTAMINATION ASSESSMENT PLAN FOR HARRY S TRUMAN ANIMAL IMPORT CENTER WITH TRANSMITTAL LETTER NAS KEY WEST FL

6/18/2002

TETRA TECH NUS

TETRA TECH NUS, INC.

AIK-02-0187

June 18, 2002

Project Number HK 4260 *via email*

Byas Glover (Code 18410)
Department of the Navy
SOUTHDIV NAVFACENGCOM
P.O. Box 190010
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Reference: CLEAN Contract No. N62467-94-D-0888
Contract Task Order No. 0254

Subject: Final Abbreviated Contamination Assessment Plan for the Harry S. Truman Animal Import Center, Rev. 0, Naval Air Facility Key West, Florida

Dear Mr. Glover:

TtNUS is pleased to send to you the final version of the Abbreviated Contamination Assessment Plan for the Harry S. Truman Animal Import Center, Rev. 0, Naval Air Facility (NAF) Key West, Florida. This document is being delivered to you in order to meet TtNUS's contractual obligation under CTO 0254. I am not expecting to receive any comments on this report; however, any comments received from Partnering Team members prior to initiating field activities (currently scheduled for 15 July 2002) will be considered for optimization of field activities.

Please call me at (803) 649-7963, extension 345, if you have any questions regarding the enclosed report.

Sincerely,

C. M. Bryan
Project Manager

CMB:spc

Enclosure

c: Ms. Debbie Wroblewski (Cover Letter Only)
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Abbreviated Contamination Assessment Plan for Harry S. Truman Animal Import Center

Naval Air Facility
Key West, Florida

Southern Division
Naval Facilities Engineering Command

Contract Number N62467-94-D-0888
Contract Task Order 0254

June 2002

Rev. 0

Rev. 0
6/18/02

ABBREVIATED CONTAMINATION ASSESSMENT PLAN
FOR
HARRY S. TRUMAN ANIMAL IMPORT CENTER

NAVAL AIR FACILITY
KEY WEST, FLORIDA

COMPREHENSIVE LONG-TERM
ENVIRONMENTAL ACTION NAVY (CLEAN) CONTRACT

Submitted to:
Southern Division
Naval Facilities Engineering Command
2155 Eagle Drive
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Submitted by:
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CONTRACT NUMBER N62467-94-D-0888
CONTRACT TASK ORDER 0254

JUNE 2002

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ACRONYMS

ARAR/SAL	Applicable or Relevant and Appropriate Requirements/Screening Action Levels
CTO	Contract Task Order
DPT	direct-push technology
EBS	Environmental Baseline Survey
EBSR	Environmental Baseline Survey Report
HSTAIC	Harry S. Truman Animal Import Center
IDW	investigation-derived waste
IR	Installation Restoration
KAG	kerosene analytical group
mg/kg	milligrams per kilogram
PCB	polychlorinated biphenyl
QA/QC	quality assurance/quality control
SouthDiv	Southern Division, Naval Facilities Engineering Command
SVOC	semivolatile organic compound
TPH	total petroleum hydrocarbons
TtNUS	Tetra Tech NUS, Inc.
UST	Underground Storage Tank
VOC	volatile organic compound

1.0 ABBREVIATED CONTAMINATION ASSESSMENT PLAN FOR THE HARRY S. TRUMAN ANIMAL IMPORT CENTER

Tetra Tech NUS, Inc. (TtNUS) has been contracted by the Department of the Navy, Southern Division, Naval Facilities Engineering Command (SouthDiv) to perform investigative sampling at the Harry S. Truman Animal Import Center (HSTAIC) Underground Storage Tank (UST) site located on Fleming Key North Landfill (Installation Restoration [IR] Site 7). This Contamination Assessment Plan is being conducted under contract number N62467-94-D-0888, Contract Task Order (CTO) number 0254. This abbreviated plan identifies soil and groundwater sampling to assess the extent of suspected contamination at the UST site.

1.1 SITE HISTORY

The Harry S. Truman Animal Import Center (HSTAIC) is located at NAF Key West on Fleming Key, north of the island of Key West (Figure 1-1). The total area of the HSTAIC site is approximately 18.4 acres, and is located on Fleming Key North Landfill, IR 7. The landfill covers approximately 30 acres and was used from 1952 to 1962 as a landfill for NAF Key West and the City of Key West. Approximately 4,000 to 5,000 tons of unknown wastes were disposed annually. In September 1995, an interim remedial action (IRA) was performed to minimize infiltration of rainwater through the former landfill waste. Clean topsoil was imported to fill low areas and promote runoff as part of the IRA based on the earlier remedial investigations (TtNUS, 2002).

The HSTAIC site consists of a concrete barn, an equipment storage building, a wastewater treatment plant, a steel water tank, a concrete truck/equipment washdown area, a gravel/grass parking area, asphalt drives, and an open grass area. The ground surface at the site consists of gravel fill material, grass, and weeds. The southwest, west, and northwest sides of the site are wooded with trees and brush (Hanson Engineers, 1999).

In May 1998, Hanson Engineers collected soil samples around three USTs located on the HSTAIC site. One 8,000-gallon UST was located west of the barn and south of the steel water tank and stored diesel fuel for the emergency electric generator. Two 4,000-gallon USTs were located between the wastewater treatment plant and the barn and stored diesel fuel for the boilers and incinerators. It was determined that one or both of the 4,000-gallon tanks had impacted the site (Hanson Engineers, 1999).

In December 1998, the U.S. Navy removed the three USTs from the site. Contaminated soil was removed from the excavations and stockpiled on the east side of the concrete spill containment area and south of the steel water tank and transformer. The contaminated soil was covered with plastic, and the

plastic was held down with concrete blocks. Contaminated groundwater was removed from the excavations and placed in a 55-gallon drum. Soil and groundwater samples collected indicated the presence of petroleum contamination under the asphalt drive north of the 4,000-gallon USTs (Hanson Engineers, 1999). One soil sample collected under the asphalt drive produced a total petroleum hydrocarbons (TPH) detection of 4,700 milligrams per kilogram (mg/kg).

Sampling of the landfill area surrounding the site (IR 7) was performed in 1986, 1990, 1993, and 1996 during a series of remedial investigations at the site. Metals and pesticides were most consistently detected above action levels in surface soil at the north end of the site near building 1419. No polychlorinated biphenyl, (PCBs) were detected (BRE, 1998).

Sediment samples from the Gulf of Mexico to the north, east, and west of the site were also obtained. Volatile organic compound (VOCs) were detected at concentrations that exceeded Applicable or Relevant and Appropriate Requirements/Screening Action Levels (ARAR/SAL) levels. Semivolatile organic compound (SVOC) exceedances were only detected during the 1990 sampling event. The pesticides 4,4'-DDT and its degradation products were detected in excess of ARAR/SAL levels, as were several metals (BRE, 1998).

Limited contamination was found in surface water and groundwater samples. As in soil and sediment, inorganics were the most common class of contaminants detected in surface water. However, antimony was the only metal that consistently exceeded the screening level criteria. Groundwater sample results indicated metals in all investigations; however, in 1996 the frequency and magnitude of the detections were less than in previous investigations. A few VOCs and SVOCs were detected above ARAR/SAL levels during each investigation; however, the compounds detected differed from year to year. Pesticides were consistently found in 1996, but were detected infrequently in previous years (BRE, 1998).

Quarterly monitoring of groundwater at IR 7 was performed from April 2000 through January 2001. Currently the site groundwater is being monitored annually for metals.

1.2 SCOPE OF WORK

Investigative soil and groundwater sampling will take place at HSTAIC in the area where the two 4,000-gallon USTs were located. A preliminary direct-push technology (DPT) assessment will include approximately 20 soil borings at the site (Figure 1-2). The borings will be taken to a 4-foot depth. A mobile laboratory will be used to screen soil and groundwater samples for the kerosene analytical group (KAG) to determine the optimum location and number of permanent monitoring wells. Vadose zone soil

samples exhibiting the highest organic vapor measurements will be submitted for fixed-based laboratory analysis. Three soil samples are estimated for fixed-base laboratory analysis.

Upgradient, downgradient, and source area wells will also be installed to delineate the plume, based on mobile laboratory analysis of vadose zone soil samples and groundwater samples collected during the DPT investigation. Approximately 6 shallow water table monitoring wells (12 ft.) will be installed at the site. One deep vertical extent monitoring well (30 ft.) will be installed at the site. All soil cuttings and development water produced during the DPT investigation and monitoring well installation will be containerized and managed as investigation-derived waste (IDW). Monitoring wells will be surveyed by a Florida-licensed surveyor following installation.

Samples will be collected from the new wells for laboratory analysis for the KAG. In addition, groundwater samples will also be collected from three wells for field screening for dissolved oxygen, carbon dioxide, and ferrous iron, as well as laboratory analysis for nitrate, sulfate, and methane. These parameters will be used to evaluate the potential for natural attenuation. Two groundwater-sampling events will occur approximately 45 days apart prior to submittal of the Site Assessment Report (SAR). Purge water will be containerized and managed as IDW.

Appropriate quality assurance/quality control (QA/QC) samples will also be collected during each investigation. Table 1-1 summarizes samples to be collected to support the HSTAIC contamination assessment.

The scope of the contamination assessment will also include a tidal influence study. Three shallow wells will be used to assess if tidal fluctuations are apparent in the area. Static water levels in the well will be measured at 15-minute intervals over a 48-hour period using an electronic data logger. The study will be conducted as close as possible to a full moon to assess the maximum possible tidal effect.

1.3 REPORTING

Results from this sampling event will be reported in the SAR. The report will identify the horizontal and vertical extent of contamination and free product based on sample results. The report will also include confirmation of the contaminant source, geologic and hydrologic conditions at the site that may affect contaminant transport to include the rate and direction of groundwater flow, classification of aquifers beneath the site, location of confining beds if any beneath the contamination zone, and location of closest potable water wells and potential to contaminate the wells. Results from the tidal influence study performed at the site will also be presented in the SAR. The SAR will be submitted in final form only.

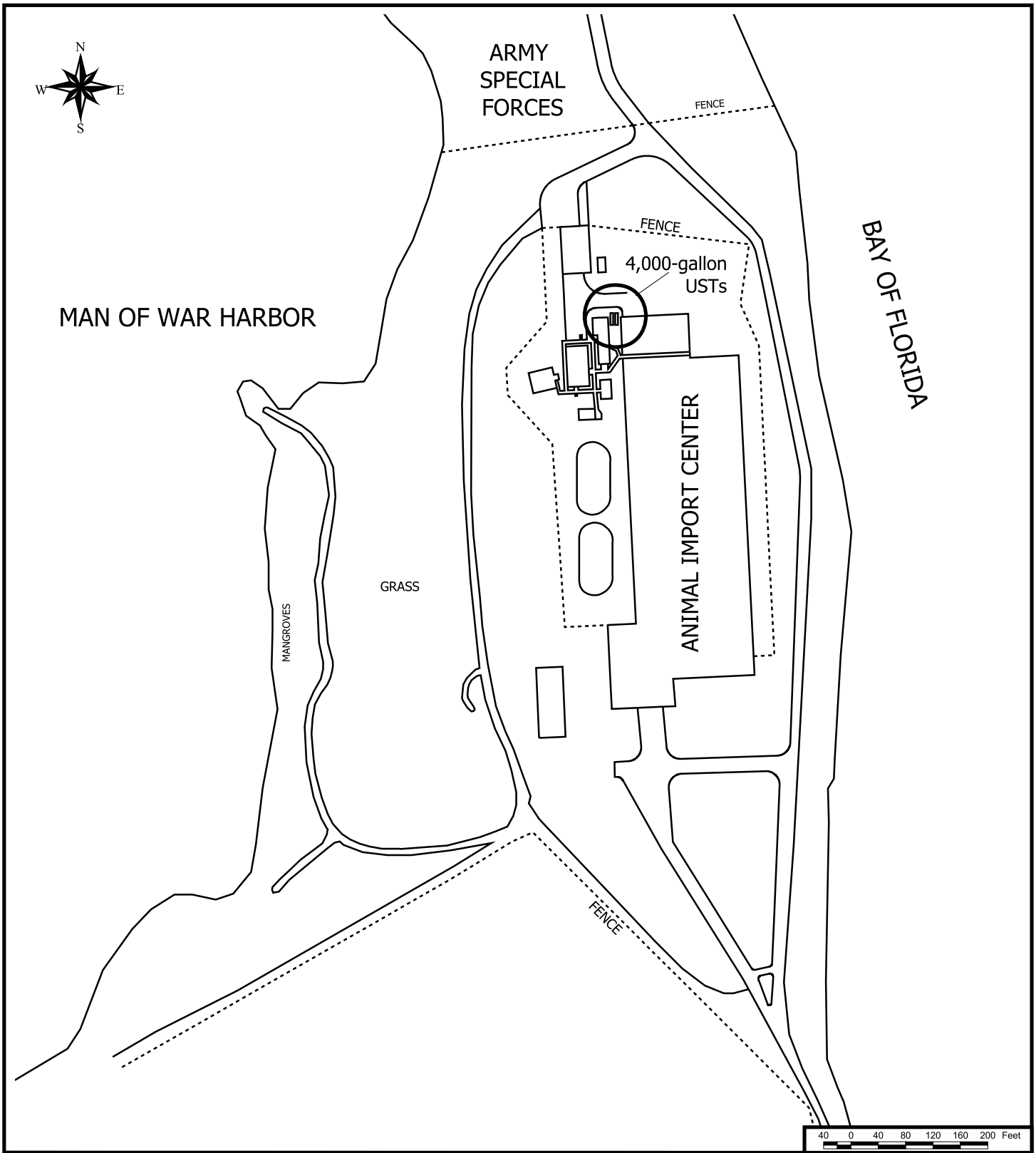
Subsequent to the state's review of the final SAR, TtNUS will prepare an addendum (if necessary) to incorporate any comments received.

TABLE 1-1

**PARAMETER GROUPS AND MEDIA OF INTEREST
FOR FIXED-BASED LABORATORY ANALYSIS
HARRY S. TRUMAN ANIMAL IMPORT CENTER CONTAMINATION ASSESSMENT PLAN
NAVAL AIR FACILITY
KEY WEST, FLORIDA**

Parameter	Soil	Aqueous	Field Blanks	Rinsate Blanks	Trip Blanks
Kerosene Analytical Group:					
VOCs	3	16	2	2	2
PAH	3	16	2	2	0
LEAD	3	16	2	2	0
TRPH	3	16	2	2	0
EDB	0	16	2	2	0
ANIONS	0	3	0	0	0
METHANE	0	3	0	0	0
FOC	3	0	0	0	0
TOX	3	0	0	0	0
RCRA METALS	3	0	0	0	0

VOC – volatile organic compound
PAH – polynuclear aromatic hydrocarbon
TRPH – total recoverable petroleum hydrocarbons
EDB – ethylene dibromide
FOC – fraction organic carbon
TOX – total organic halogens



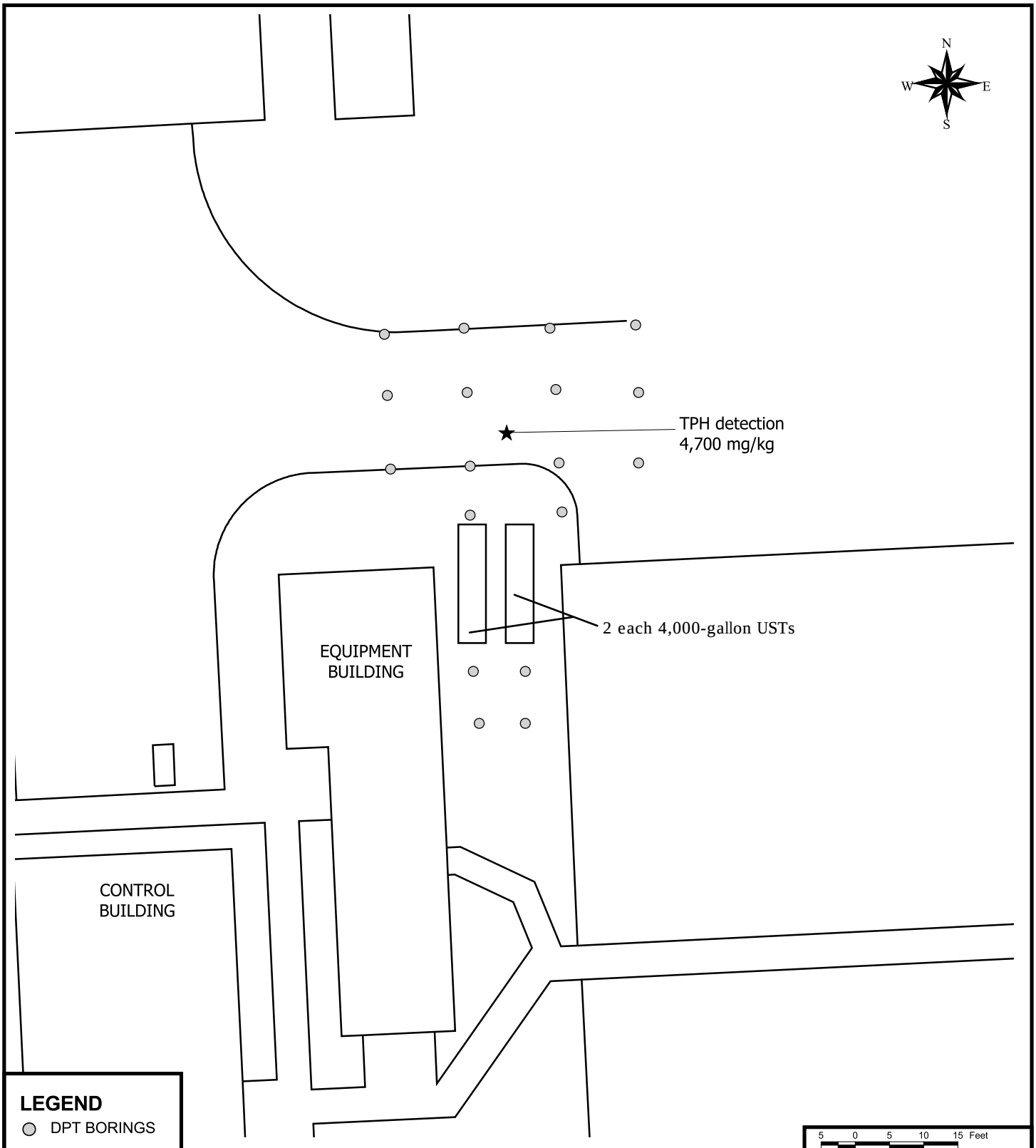
NO.	DATE	REVISIONS

DRAWN BY CM	DATE 6/16/2002
CHECKED BY EHM	DATE 6/16/2002
COST/SCHED-AREA	
SCALE	AS NOTED

CONTAMINATION ASSESMENT PLAN
FOR THE HARRY S. TRUMAN
ANIMAL IMPORT CENTER
FIGURE 1-1 SITE LOCATION
NAVAL AIR FACILITY
KEY WEST, FLORIDA

CONTRACT NO.	N4260
APPROVED BY CMB	DATE 6/16/2002
APPROVED BY	DATE
DRAWING NO.	REV. 0

P:/GOVERNMENT/KEYWEST/EGIS/IR7 ASSESMENT PLAN.APR LAYOUT: FIG 1
DATE: 6/16/2002 BY: CM



NO.	DATE	REVISIONS

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CHECKED BY EHM	DATE 6/16/2002
COST/SCHED-AREA	
SCALE	AS NOTED

CONTAMINATION ASSESMENT PLAN
FOR THE HARRY S. TRUMAN
ANIMAL IMPORT CENTER
FIGURE 1-2 DPT BORING LOCATIONS
NAVAL AIR FACILITY
KEY WEST, FLORIDA

CONTRACT NO. N4260	
APPROVED BY CMB	DATE 6/16/2002
APPROVED BY	DATE
DRAWING NO.	REV. 0

P:/GOVERNMENT/KEYWEST/EGIS/IR7 ASSESMENT PLAN.APR LAYOUT: FIG 2
DATE: 6/16/2002 BY: CM

REFERENCES

BRE (Brown and Root Environmental), 1998. Supplemental RCRA Facility Investigation and Remedial Investigation Report for Eight Sites; Naval Air Facility Key West, Florida. Prepared for Department of the Navy, Southern Division Naval Facilities Engineering Command, Aiken, South Carolina, January.

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